

## **Farmers Information Literacy and Awareness towards Agricultural Produce and Food Security: FADAMA III programs in Osun state Nigeria**

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### **Abstract:**

*Agriculture remains the mainstay of the Nigerian economy, because it does not only contribute to the largest share of Gross Domestic Product (GDP), it is the largest employer of labour and a key contributor to wealth creation and poverty alleviation, as large percentage of the population derive their income from agriculture and related activities. Agricultural sector is the backbone of many economies in Africa, but most African countries are yet to devote their efforts to the dissemination of information and modern knowledge on agriculture to rural areas, where 70 to 80 percent of the African population lives. For any nation to improve on its agricultural productivity and ensure food security, access to information and awareness programs on agricultural practices is key in ensuring food security. Information on good knowledge of modern agricultural technology and its usage will enable improved cultivation, harvesting and storage that will reduce famine and*

*improve the nation's all round wealth. To achieve this, commitment to free information flow, training and retraining program is a must. Information is a critical determinant of the success in human endeavour such as in storage of farm produce towards food security*

*Information dissemination to farmers in the agricultural sector is done by Agricultural extension officers. In Nigeria, Agricultural extension workers have the primary responsibilities to help farmers make efficient use of available resources to meet the nation's food needs. Report has it that Osun State is making headway in farm produce among other state of FADAMA III project having effect on social statures among others. It is imperative to know how FADAMA III is meeting information needs of the farmers to help food security. Strong information network among FADAMA farmers assist them in area of farming, harvesting, storage and marketing their products. This paper is bases on the study carried out in Osun State, a western state in Nigeria and under Fadama III project.*

**Keywords:** Information literacy, information awareness, information needs agricultural productivity, food security, FADAMA III farmers, Osun state

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## **Background to Study**

In the quest for human capital development especially to help developing countries like Africa to reduce poverty and promote food security, improvement of agricultural produce was chosen as a major means of poverty alleviation. Therefore different programs were initiated at different times in different locations in Africa and Nigeria was privileged to be one of such chosen countries for these agricultural projects. Such projects were carried out by different bodies; such as The Technical Centre for Agricultural and Rural Cooperation (CTA), which was established in 1983 with the mandate of developing and providing services that will improve access to information for agricultural development and to strengthen the capacity of continents like Africa, Caribbean, and the Pacific (ACP) to produce, acquire, exchange and utilise information in all areas of agriculture (Olowu, 2008). There were also foundations and research institutes established to carry out research to find out sustainable solutions for ending hunger and poverty alleviation in developing world such as the international food policy research institute (IFPRI).

The success of these programmes brought in other organisations like The World Bank to fund agricultural process through rural farmers; such is the FADAMA III project in Osun State, Nigeria.

FADAMA III project includes definite objectives of;

1. Reducing poverty through creative farming methods
2. To develop a sustainable income of rural land water resources users through:
  - (a) Capacity building, communications and information support components
  - (b) Small scale community –owned infrastructure component
  - (c) Agricultural development program – ADP
  - (d) Asset acquisition for individual
  - (e) Project management supports
  - (f) Advisory services and imputes support

Fadama III project was inaugurated in Nigeria in July 28<sup>th</sup> 2010, the term “Fadama” is a Hausa name for irrigable land for cultivation, usually for low-lying plains that is underlaid by

shallow aquifer along major river basins. It serves as source of water for livestock during dry season, and also supports large and diverse resident or transient wildlife including herbivores, carnivores and migratory birds. According to Adubi (2012), World Bank's Fadama III project is a follow-up to the Fadama II project, which impacted the lives of rural farmers, raising their incomes by 63 percent, he expressed that the project is fast becoming a household name that has cut across all states in Nigeria.

Nigeria the most populous country in Africa recorded a total population of 174.5 million in December 2013, having 70% of her people engaged in agriculture as the main branch of economy. In addition to the federal capital territory Abuja, Nigeria has 36 states covering a total area of 923,763km<sup>2</sup>, out of this vast land area, 91million hectares are found to arable land and only 42% of this is in use for cultivation Olowu (2008) Osun state is one of the 6 states that make up the south-western geographical zone of Nigeria with much arable land. Osun state covers an area of 8700 kmsq with capital at Osogbo with a growing population of about 3,416,959. Farming remains the centre of economy of Osun state having well over 90% of her rural population involve in farming activities relating to crop sub-sector, thereby providing the bulk of income in the state( in Osun State website). A larger percentage of the population derive their income from agriculture and related activities (NEEDS, 2004). Olowu (2008), observed that Nigeria have 68% illiteracy rate of her population living in the rural area. It is pertinent to know that farming remain largely in the hands of peasant farmers who majorly relying on old traditional ways of farming, whose information needs are not met and they are lacking relevant strategies and tools for modern farming.

Adomi (2003), observed that this category of farmers lives in the rural area and they lack necessary information and awareness for better tools and implementation strategies that can improve their means of farm method, marketing and food storage for all year round food sufficiency. The ever increasing information explosion on agricultural produce: Seedling, harvesting, marketing and storage among others. Information is a means of transferring events for better awareness to add new meaning that could change events, lives, or experiences; this could have considerable implications on farmers, farm produce, implementation of farm tools and the extension services. This present work is therefore an attempt to survey how farmers information literacy affect agricultural produce, food security, marketing, storage and the lives of the farmers in other to alleviate poverty in the study area and Nigeria in general. There is need for good information flow and information sharing among agricultural stakeholders for better professional update and improved produce, according to Joel (2011), this can best be carried out among researchers, policy makers, and the farmers who must be well informed by all means in other to enhance better agricultural produce, marketing and food storage to ensure food security. Fortin and Pierce (1998) reported that dissemination of adequate information literacy to the grass root especially to farmers will enhance productivity.

However, useful information dissemination through different media, practical hand-on experience, better direction and awareness are lacking most of the times in the agricultural and food sector in developing worlds where farming is highly concentrated among rural farmers. This category of farmers lack necessary awareness on modern strategies that can improve their farming methods, marketing and food storage, thus some crops seasonal thereby having cost effect on the citizenry. Improved agricultural produce and storage in large quantity can only be influenced by unimpeded information flow among farmers; as awareness in ones field of endeavour will improve productivity and abundance of farm

produce all year round. Low (2000) defined information as a means of transferring events for better awareness to add new meaning that could change events, lives, or experiences

### **Problem Statement**

Farmers need to keep abreast of necessary information that will enhance cultivation and be well aware of issues and developments surrounding any crop before every farming season. This is because they are actively involved in feeding the nation and sustaining industries as major suppliers of raw material for industrial production through investors. Therefore farmers need to be on top of information to meet investors need, and be aware of strategies to reduce spoilage, increase food production and marketing strategies in packaging and storage to enhance food security all year round. There is a paradigm shift from old way to modern technology method of sustaining best practices necessary for meeting production in the agricultural sector. Although there are lots of information flows in the agricultural sector, no study has been able to provide empirical study on farmers' information literacy and awareness towards farm produce and food security with the intervention of FADAMA III in Osun State, Nigeria.

### **Objective of Study**

The study seeks to achieve the following objectives:

1. What is the mission of FADAMA III project in Osun state that is geared towards food security?
2. What strategic roles is FADAMA III information and knowledge sharing playing on farmers information need in Osun State?
3. What are the impacts of farmers' information literacy and awareness on agricultural produces and food security in Osun State?
4. What are the challenges faced by FADAMA III in achieving her goals in Osun state?

### **Review of Related Literature**

According to Low (2000), information is a means of transferring events for better awareness to add new meaning that could change events, lives, or experiences, awareness and use of information produce knowledge. The ever increasing information explosion on agricultural produce: Seedling, harvesting, marketing and storage among others may have considerable implications on farmers, implementation of farm tools and the extension services, (Oto, 2011, Ovwigho, 2009). Report has it that dissemination of adequate information literacy to the grass root especially to farmers will enhance productivity.

The importance of famers' information literacy and awareness towards agricultural produce and food security cannot be over-emphasized. Sokoya, Onifade and Alabi (2012), observed that interpersonal connectivity between farmers and agricultural extension agents will enhance farmers' information literacy, knowledge and awareness of current trend in farming that will boost stages of faming and abundance food supply. The importance of farmers' information literacy cannot be over emphasised as they produce what the nation need to feed her populace all year round.

There has always been contributions from research results on how agricultural production can be increased. According to Olowu, (2008), such research results include high yielding breeds of animal, disease resistant breed of seeds and seedlings, mechanized farming and different storage means which farmers must know to improve productivity and increase food security. Farmers' information literacy in this study is seen as the farmers' ability to critically think and determine the extent of his information need and be able to access available information effectively and efficiently and evaluate the information to accomplish a specific purpose in farming. Different definitions are given to information literacy depending on the concept of the study, American Library Association (1995) expressed that "To be information literate, a person must be able to recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information" Therefore information literate people are those who have learned how to learn, having the ability and skilled in critical thinking; to be information literate is a lifelong learning.

Eamin Ali (2012) observed that an information literate individual is able to:

- determine the extent of information needed
- access the needed information effectively and efficiently
- evaluate information and its sources critically
- incorporate selected information into one's knowledge base
- use information effectively to accomplish a specific purpose, and
- understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally (Association of College and Research Libraries, 2000).

The necessary information could be useful to farmer at different stages of farming; harvesting, marketing and food storage. According to Oladeji (2011), storage of farm produce is not the sole duty of farmers but other stakeholders like investors who though do not have knowledge of farming but have the scientific knowledge of storage and financial capability to buy farm produce in large quantity at the peak of harvest season. Therefore farmer need to know and plant more of such farm produce that investors are yearning for and be able to link the investor through different media; such media expressed the strategic ways of marketing farm produce after harvesting. Researchers (Daudu and Anyanwu 2009, Oladele 2011, Ota and Shimayohol 2011, Oladeji, 2012) observed that farmers can get needed information through different channels; majorly through agricultural extension agents, mass media, folk tales, social networking, and interpersonal relationship with fellow farmers and relations and agricultural project administrators like FADAMA III officials.

Different communication channels as observed by researchers are useful for good information literacy and awareness programs for farmers, but the method of such channels in delivering information is key. Meitei and Devi (2009) observed that different channels can be used in getting to identify types of information needs of farmers in rural Manipur in India. According Otto (2011), the use of communication channels or media is of great importance because the knowledge of it will provide keys for understanding and predicting outcomes of communication process. It is common knowledge that the practical visual transfer of knowledge will give better understanding to farmers especially the rural farmers who are seen to be less literate. Otto (2011), observed that farmers in rural areas are predominantly not lettered as reading printed media was way far from use by rural farmers from whom majority of farm produce come. Therefore it is asserted that exposure to various communication channels in farmers local language is the wish of farmers. According to Israel and Willson

(2006), in Okwu (2011), developing an understanding of extension sources and channels used by clients to obtain information is a pre-requisite for efficient educational programming because messages that go unheard or unseen cannot lead to change. There is much ado to better the agricultural extension agents in delivering information to enhance farmers' information literacy to better future steps in farming. This shows that available information should be delivered in farmers' local language to give the best knowledge and understanding of practical examples. Librarians as information provider could organise this awareness program through the use of mass media channels like the use of projectors in showing films, organise plays and talks to farmers group in different communities. Lack of awareness of the importance of librarian's role compound the problems of limited manpower in disseminating necessary information and teaching farmers on better use of current information that can improve experience of last planting season.

Extension agents should read ahead of time from the outcome of last planting season to know the information need of the farmers, Omotayo (2005) corroborated this statement that a number of developments in many developing countries were shaping the future of extension services and setting the stage for better performance to channel farm produce for surplus and storage for food security. In addition the need of improved services from extension agents, the use of mass media is of essence to enhance farmers' information literacy through the use of television, projectors, advertisements that will help the farmers and agricultural investors to know where a particular produce is available in large quantities. According to ( Oladeji 2011)and Meitei, 2009.), use of different methods to disseminate information to farmers because limited manpower of agricultural extension agents will positively affect the level of farmers information literacy in rural remote areas. Therefore advertisements in different format is proposed as a good way of promoting awareness among farmers and investors, Oladeji (2011) opine that agricultural advertisements in news papers are vanguard for awareness creation to boost agricultural enterprise and dissemination of agricultural information to wider reach in and outside farming population . This channel will give first hand information to whoever could buy farm produce in large quantity for industrial use and storage. It is of note that storage facilities for agricultural produce are highly insufficient among the rural farmers; this brings much spoilage at the peak of harvesting. Agricultural cooperative is another channel for farmers' awareness and information literacy for improved farm produce towards food security. Creation of agricultural farm centres for town meeting, where generated information by librarians can be processed and made available to farmers at need would be of importance to boost farmers' information literacy.

Lack of awareness of the importance of librarian's roles compound the problems of limited manpower in all these, librarian could be empowered to disseminate information to farmers through the use of film slides and more. Fadama III project in Osun State is an organisation that plays a frontal role of coordinating farmers' information needs and disseminating same through awareness program among local farmers in different communities (Fadama III website). The dearth of agricultural information flow and awareness among local farmers has considerably reduced farming and storage of farm produce to enhance foods security. It against this background that this study cares to find out how Fadama III project is solving these problems in Osun State, Nigeria

## **Methodology**

This research focused the efficacy of FADAMA III project on farmers' information literacy in Osun State, Nigeria. A participatory research design was adopted for the study for one to one

interview with selected farmers among different Fadama user groups (FUG) and key informants in study area. The population of the study comprised of Fadama farmers in Osun State being the seat of Fadama III project. A well structured questionnaire was administered to Fadama officials with questions spread over the general profile of the respondent on farmers information need, sources of information, access to information ,efficacy of FADAMA III impact on farmers farm produce; planting, harvesting, marketing, storage for food security and effect on poverty alleviation.

### **Objective of the study Objective of Study**

The study seeks to achieve the following objectives:

1. What is the mission of FADAMA III project in Osun state that is geared towards food security?
2. What strategic roles is FADAMA III information and knowledge sharing playing on farmers information need in Osun State?
3. What are the impacts of farmers' information literacy and awareness on agricultural produces and food security in Osun State?
4. What are the challenges faced by FADAMA III in achieving her goals in Osun state?

### **Results**

RQ1. What is the mission of FADAMA III project in Osun state that is geared towards food security?

The aim of FADAMAIII project is to increase the income of users of land and water resources on a sustainable basis. The project will help reduce rural poverty, increase food security. One of the key features is to empower rural community to collectively decide on how resources are allocated and managed for their livelihood activities. The components that Fadama III uses to operate include:

- Capacity building, communication and information support
- Small- scale community owned infrastructure
- Advisory services and input support
- Support to ADPs ( Agricultural development programmes) sponsor Research and on-farm Demonstration :
- Asset Acquisition for Individual FUGs/EIGs Component
- Project management monitory, Evaluation and EMP compliance.

Fadama III project in Osun operates in 20 LGAs namely –Atakumosa west,Ila, Iwo, Boluwaduro, Boripe, Egbedore, Ede, North, Ife East & Area office,Ife central south, Irewole,Isokan, Orolu,Irepodun,Ifelodun, Olorunde, Odo-otin, Oriade and Ola Oluwa.

Potential Fadama user must belong to a- user Group (FUG)

A minimum of 10-15 farmers make a group (FUG), and 15 such groups will organise themselves into a Fadama community Association (FCA) in such community, there will be knowledge sharing of information, infrastructure and cooperation to access loan from Fadama.

RQ2. What strategic roles is FADAMA III information and knowledge sharing playing on farmers information need in Osun State?

Sensitise the beneficiaries at the inception of the programme on:

- Objective of the project
- Eligible beneficiaries (factors that makes a farmer eligible to benefit Fadama facilities)
- Various categories of beneficiaries ( include widows, etc)
- Procedures to be beneficiaries
- Educate beneficiaries through –Radio programmes(15mins),treatment of relevant topics that can meet needs of farmers
- Organisation of workshops for farmers and stakeholders such as local government information officials and press men
- Farmers are informed on any new development through Radio, T.V programmes, print media- Handbills, posters, flyers and meeting with opinion leaders.
- Each week a group of beneficiaries in a local government is put on the air. The programme is tagged “Akityan Fadama-“T.V. This programme identify farmers problems, analysis the course of the problem, solve the problem and disseminate the solution which becomes new relevant information to farmers and also show case success stories of Fadama III resources users.
- The Fadama information and knowledge system(FIKS) allows farmers access to agricultural and market information from their phones
- Advisory services- empowers Fadama land users farmers and pastoral farmers access to free agricultural and market information, access to veterinary doctors
- Capacity building support for community organisations train farmers on managerial skills and ability to keep records



**PRODUCTION SCHEDULE FOR AKITIYAN FADAMA TV PROGRAMMES FOR JANUARY – JUNE 2013**

<b>S/N</b>	<b>LOCAL GOVERNMENT AREA</b>	<b>DATE</b>
1.	Atakumosa East	17/01/2013
2.	Boripe	24/01/2013
3.	Atakumosa West	31/01/2013
4.	Boluwaduro	07/02/2013
5.	Egbedore	14/02/2013
6.	Ede North	21/02/2013
7.	Ife Central	28/02/2013
8.	Ifelodun	07/03/2013
9.	Ife South	14/03/2013
10.	Ife East Area Office	21/03/2013
11.	Irepodun	28/03/2013
12.	Ila	04/04/2013
13.	Ife East	11/04/2013
14.	Irewole	18/04/2013
15.	Iwo	25/04/2013
16.	Olorunda	02/05/2013
17.	Oriade	09/05/2013
18.	OdoOtin	19/05/2013
19.	Orolu	23/05/2013
20.	Ola-Oluwa	30/05/2013
21.	Isokan	06/06/2013

**FIELD WORK 2014 SOURCE: FADAMA III OFFICE IWO OSUN STATE  
RQ2 TABEL 2**

<b>S/N</b>	<b>LOCAL GOVERNMENT AREA</b>	<b>DATE</b>
1.	Atakumosa East	05/12/2013
2.	Boripe	12/12/2013
3.	Atakumosa West	19/12/2013
4.	Boluwaduro	26/12/2013
5.	Egbedore	02/12/2013
6.	Ede North	02/01/2014
7.	Ife Central	09/01/2014
8.	Ifelodun	16/01/2014
9.	Ife South	23/01/2014
10.	Ife East Area Office	30/01/2014
11.	Irepodun	06/02/2014
12.	Ila	13/02/2014
13.	Ife East	20/02/2014
14.	Irewole	27/03/2014
15.	Iwo	06/03/2014
16.	Olorunda	13/03/2014
17.	Oriade	20/04/2014
18.	OdoOtin	27/04/2014
19.	Orolu	03/04/2014
20.	Ola-Oluwa	10/04/2014
21.	Isokan	17/04/2014

RQ3. What are the impacts of farmers' information literacy and awareness on agricultural produces and food security in Osun State?

- Fadama resource users' have exposure to better training in handling and management of their assets which increase income generation.
- Provision of processing and storage facilities has also helped in reducing post harvest loses and also creates added value to production outputs.
- Good knowledge of importance of advertisement to enable business men buy farm produce in large quantity for industrial use in urban areas is a plus for farmers under Fadama project. Most time traders come to order for farm produce to take to cities for sale.
- Farmers get to know the weather situation ahead of planting period to prepare them for the season. Farmers are categorised into groups for training and workshops to better their knowledge in planting, use of infrastructure and other areas of food security. Awareness programs are widely created for farmer on different mass media channels such as radio and television programs where achievements of different groups are aired for others to learn from.
- Communication is done in the best language of the farmers for better understanding. Fadama project enable free phone services for easy communication, to get in touch with Fadama officials at need.
- Financial assistance such as loan opportunity is generally made available to farmers to better output.
- Awareness of opportunities on pest control program is regularly giving to farmers in addition to fertilizer and its uses.
- Increase in food production and better knowledge on food security

RQ4. What are the challenges faced by FADAMA III in achieving her goals in Osun state?

### **Financial constraints**

Fadama 111 project framer is entitle to financial assistance after training to start off farming however such farmer need to contribute certain percentage to enable them access loan; but poverty makes this a huge problem for farmers to assess. Most of the time beneficiaries' contributions are not forthcoming. Farmers often find it difficult to contribute their own percentage to the project which hinders them from securing loan to implement their project.

## **Land use problems**

- Land tenure system problem
  - Land owners attach strict conditions to leasing their lands for farmers
- Competitions for water between farmers and herdsman; leading to conflict among farmers
- Destruction of crops by animals of pastures
- Non availability of space for farming

## **Low level of literacy**

- Not all farmers could read and write and this hinder the speed at which they could perform effectively in use of pesticides, marketing etc
- This affect sale of their produces where they await help from intermediary most times

## **Conclusion and Recommendations**

Information is a vital resource for successful socio-economic activities; all fields of human endeavour needs information as a necessary component for better performance especially where such information is turned to knowledge and positively used. It is a common knowledge that people perish for lack of knowledge, for the wise it is what one does not know that could kill. Fadama III project has greatly enhanced farmers, farming, and farm produce and food security by living up to its objectives to sustainably increase the income of local farmers on land and water resources in other to reduce poverty in the rural area and to increase food security. Fadama111 project is advancement in correcting the short coming in Fadamer 1 and 11 projects. There is improvement in communication flow among fadamer farmers with provision of free phone on toll free calls.

However, there is much room for continuity and improvement on farmers' information literacy. All media channels should be explored to create awareness in local language to encourage understanding and implementation of ideas and programs in the easiest ways possible. This calls for a well equipped farm community hall where farmers could meet and be addressed on their information need. Since most farmers are not literate, adult evening education could be organised for them to boost their knowledge to be able to read and write thereby they will be able to address their need through the Internet, reading farmers

magazines, news paper Colum on agriculture and be able to make concrete decisions on the use of pesticides and manure right on time and as appropriate.

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